

FIG. 1

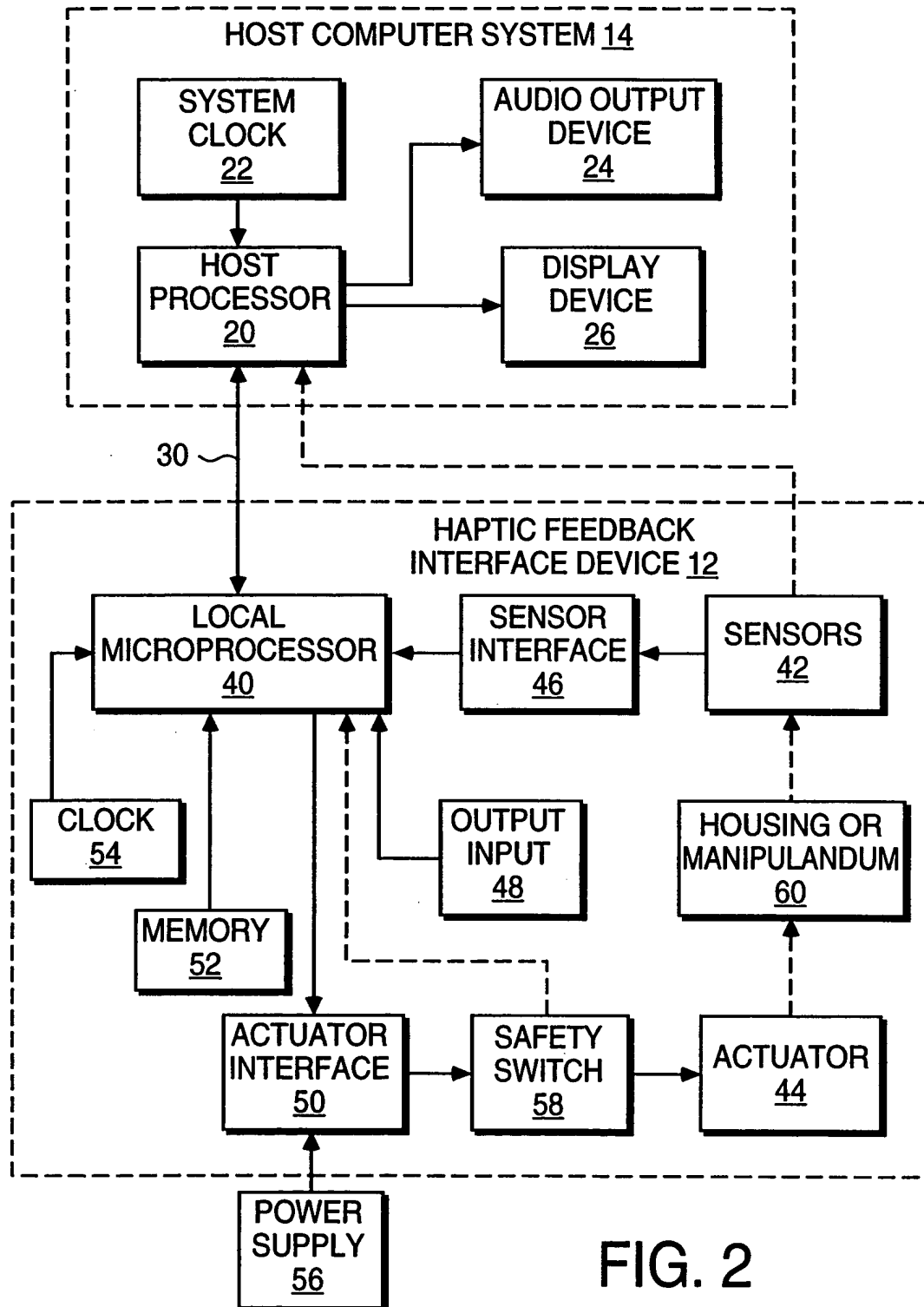


FIG. 2

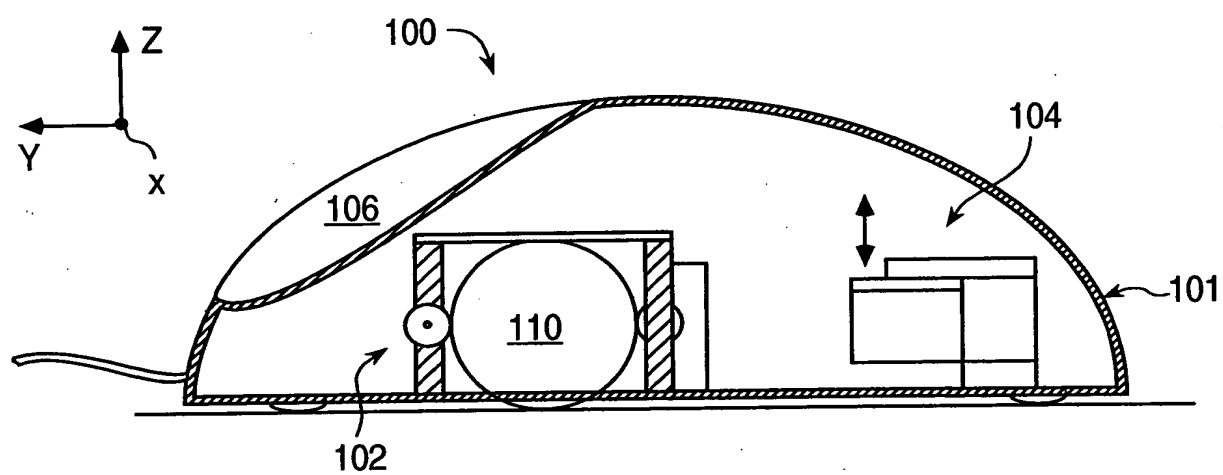


FIG. 3

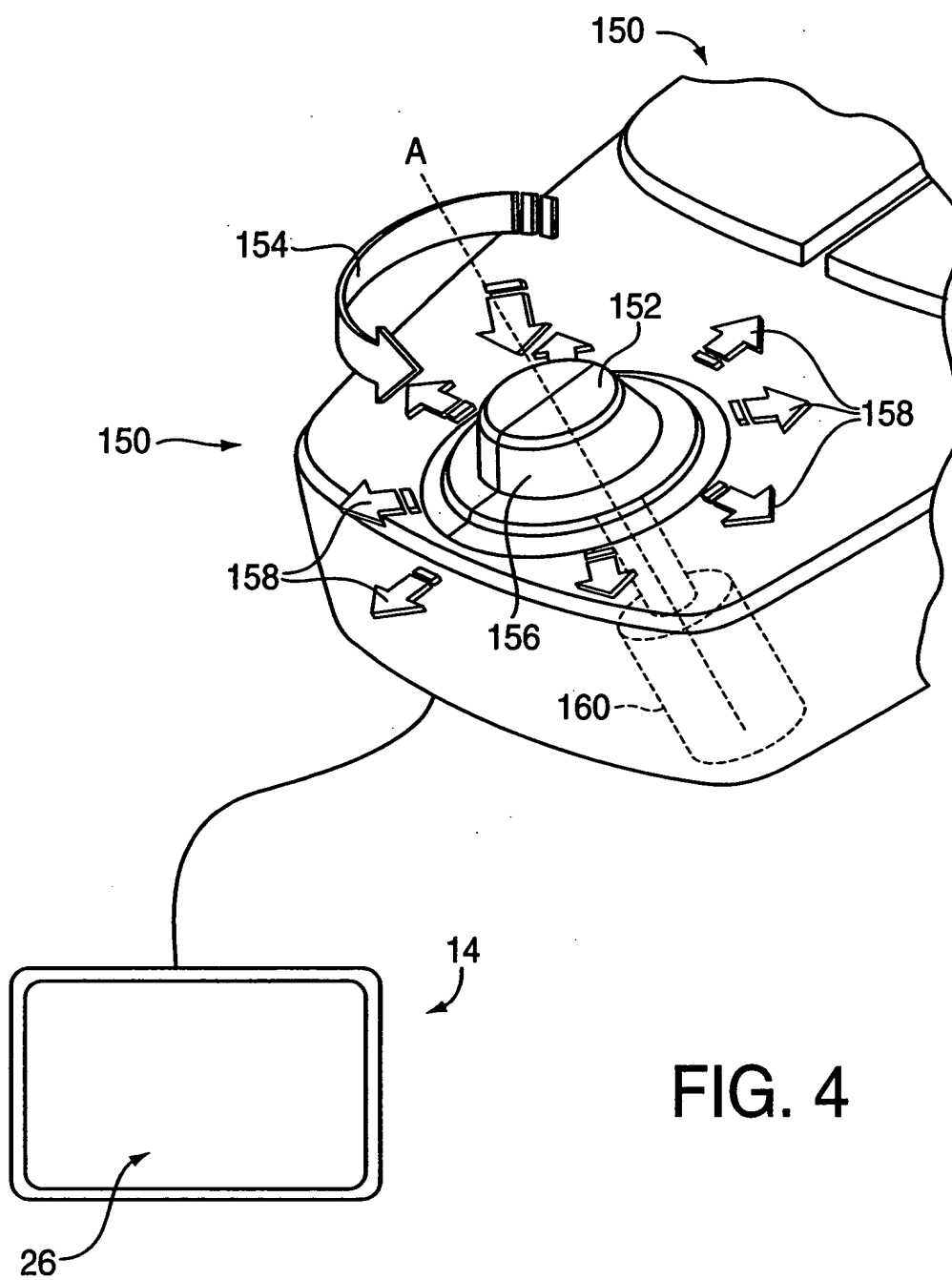
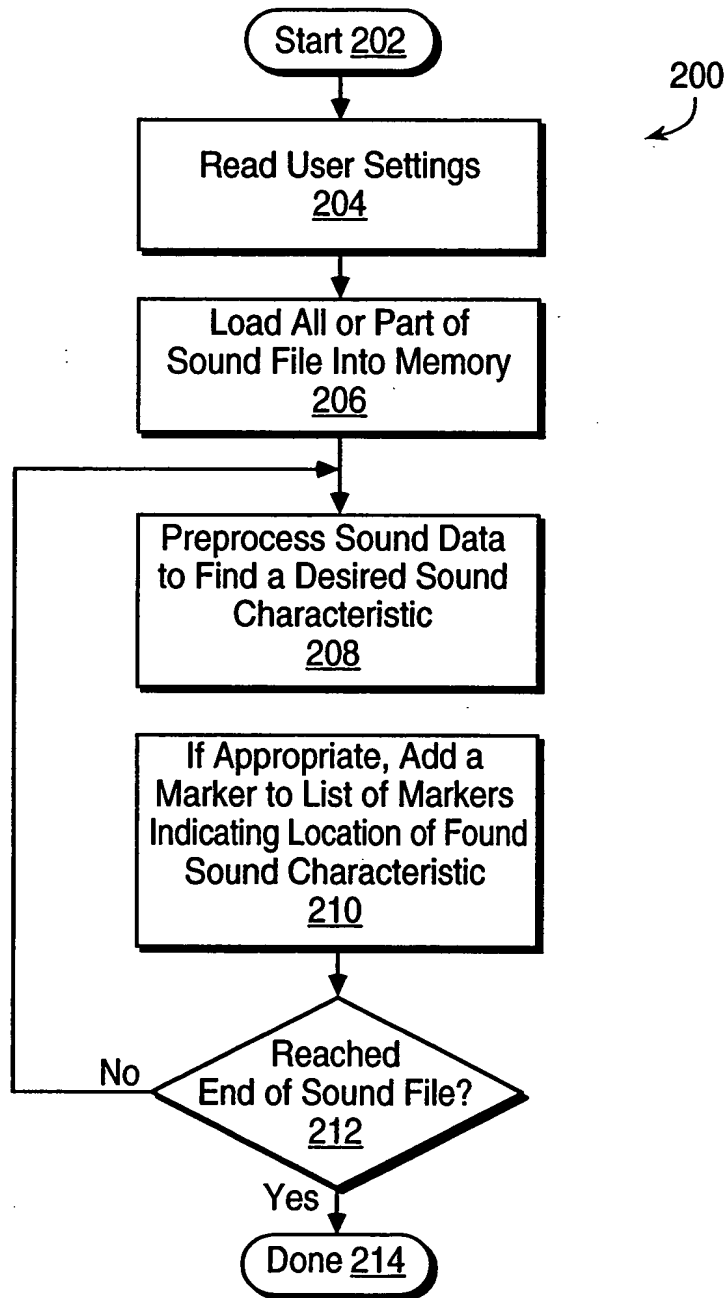


FIG. 4

FIG. 5



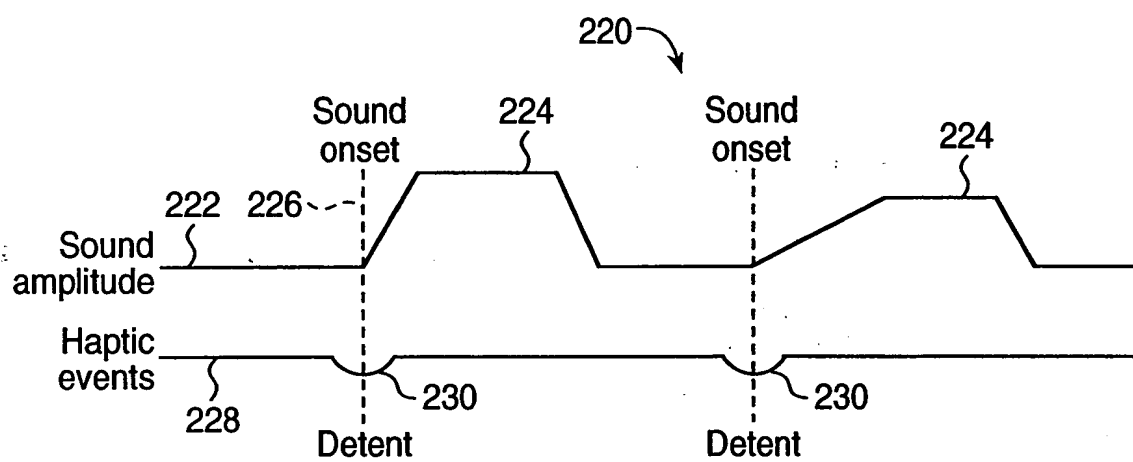


FIG. 6

FIG. 7

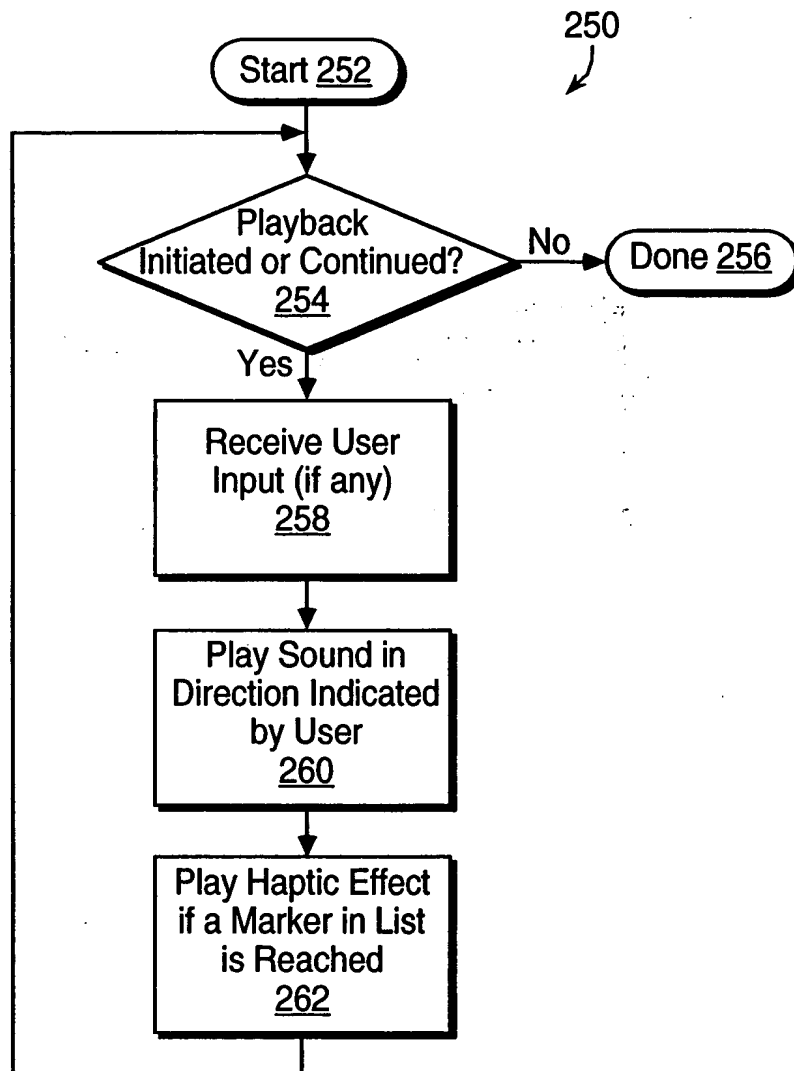
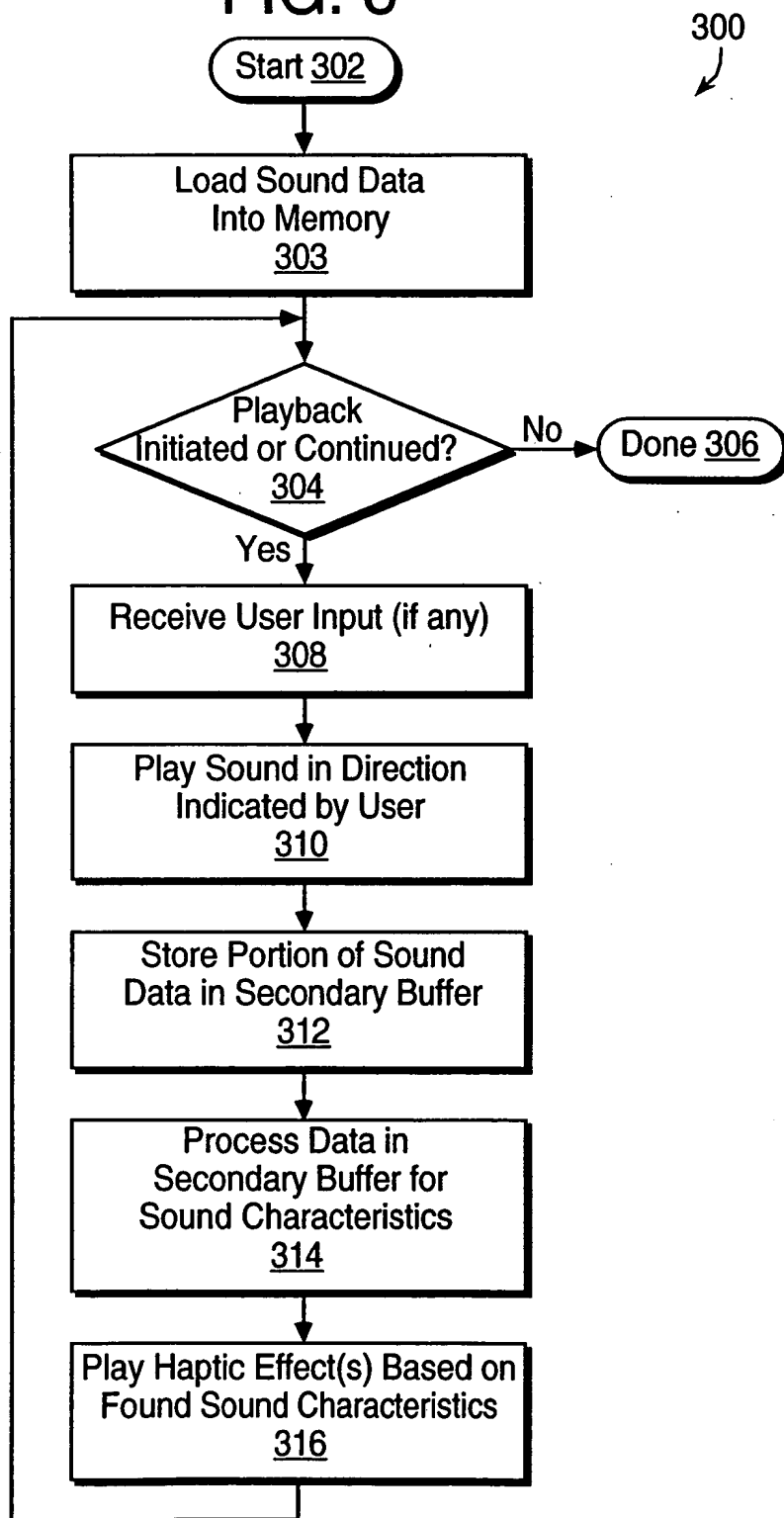


FIG. 8



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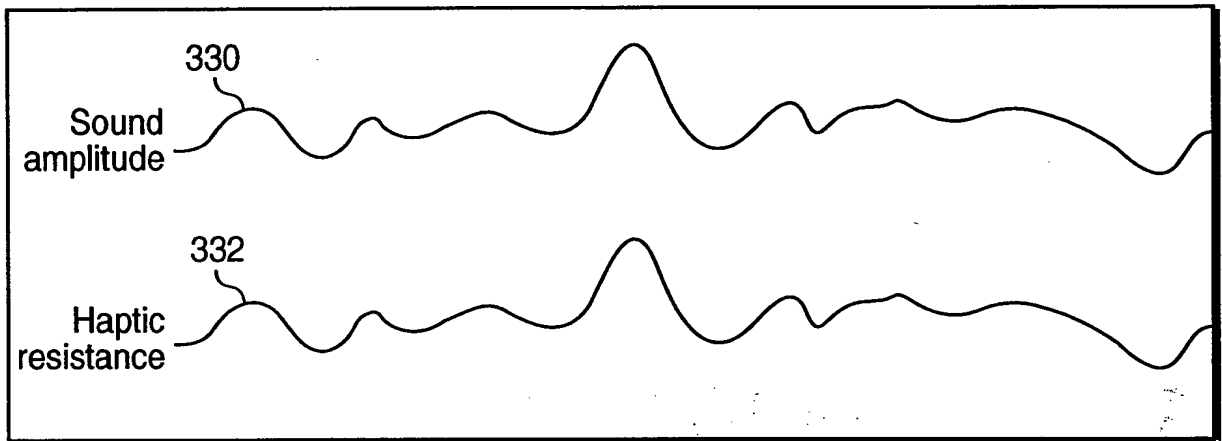


FIG. 9A

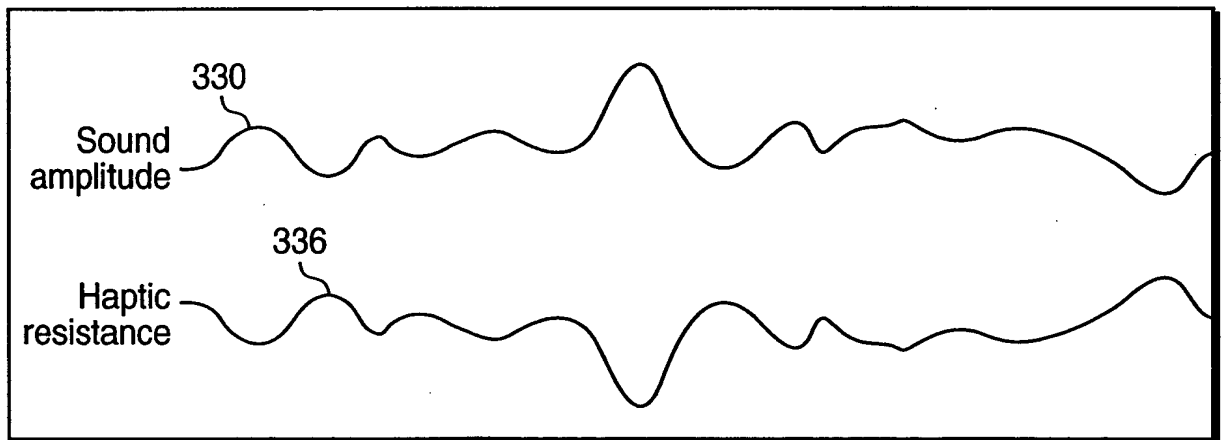


FIG. 9B

TouchSound [] [] [] []

File Test

Sound Control 402

Sound File 404 [] 406

Status [] No file loaded

Frequency [100] 100 Hz [] 100 Hz

Pan [0] Left [] Right

Volume [0] Low [] High

☐ Loop Sound ~ 412 408

Play [] **Stop** [] **Pause** [] **Exit** []

Processing Parameters 420

Peak Thresh [50] 0% [] 100%

Peak Reset [20] 8% [] 100%

Min Beat Int. (msec) [200] 20 [] 200

Window Size (samples) [300] 2 [] 500

Device 430

☒ Knob- control ☐ Knob- rate ☐ Fee ☐ WFFM

Mouse Control 432

Scroll 434 []

Shuttle 436 []

Test 438 []

Notes 414 []

Debugging

[] [] [] []

[] [] [] []

FIG. 10

TouchSound Future

Open

Sound File

music.wav

502

508

Harmonics Tracking

On

Off

510

Continuity

Continuous

Event-based

512

Sound Force Magnitude Mapping

Direct

Inverted

504

Haptic Device

Knob

iFeel

Wingman

Trackball

506

Filter

Type

Low Pass

High Pass

Bandpass

Cutoff

Cutoff

Low

High

1000 Hz

8000 Hz

900 Hz

1250 Hz

Apply Filter

Waveform

514

516

500

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FIG. 11